ELSEVIER

Inorganica Chimica Acta 242 (1996) v–xii

Inorganica Chimica Acta

Contents

Preface xiii

Physical properties and hydrolysis kinetics of (μ-oxo)bis{tris(2-pyridylmethyl)aminechromium(III)} dimers with complementary sulfate or molybdate bridging ligands 1
R.A. Holwerda (Lubbock, TX, USA)

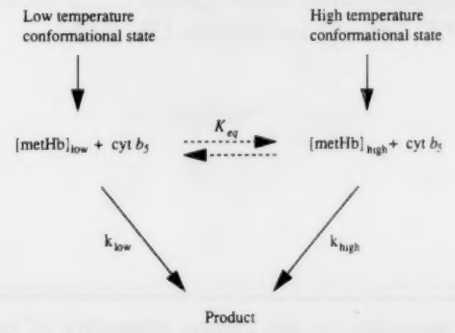
$$[(tmpa)Cr(O)(EO_4)Cr(tmpa)]^{2+} + H_2O \xrightarrow{k_{fast}} [(EO_4)(tmpa)CrOCr(tmpa)(H_2O)]^{2+}$$

$$[(EO_4)(tmpa)CrOCr(tmpa)(H_2O)]^{2+} \rightleftharpoons [(EO_4)(tmpa)CrOCr(tmpa)(OH)]^{+} + H^{+} \quad K_a$$

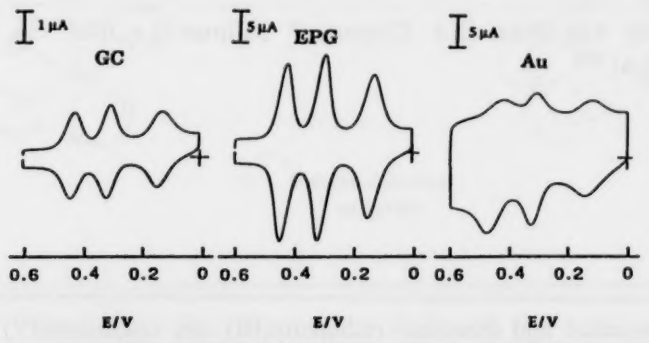
$$[(EO_4)(tmpa)CrOCr(tmpa)(H_2O)]^{2+} \xrightarrow{k_a} [(tmpa)Cr(OH)_2Cr(tmpa)]^{4+} + EO_4^{2-}$$

$$[(EO_4)(tmpa)CrOCr(tmpa)(OH)]^{+} \xrightarrow{k_b} [(tmpa)Cr(O)(OH)Cr(tmpa)]^{3+} + EO_4^{2-}$$

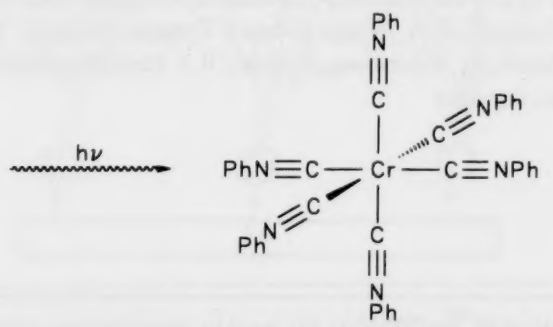
Unusual temperature dependence of electron transfer rates in the hemoglobin reductase system 7
T. Qiao, R.C. Henderson, G. McLendon (Princeton, NJ, USA)



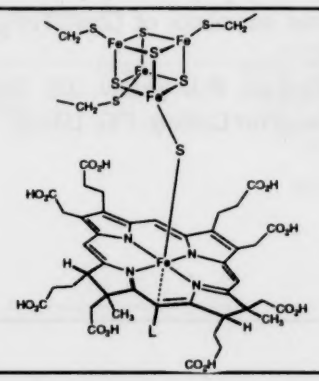
Spontaneous adsorption of heteropolytungstates and heteropolymolybdates on the surfaces of solid electrodes and the electrocatalytic activity of the adsorbed anions 11
C. Rong, F.C. Anson (Pasadena, CA, USA)



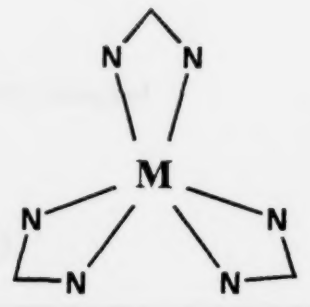
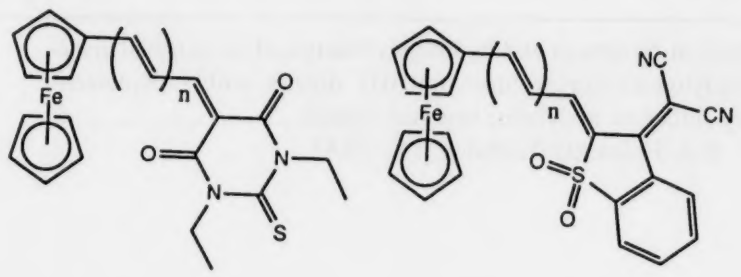
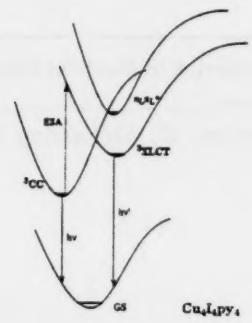
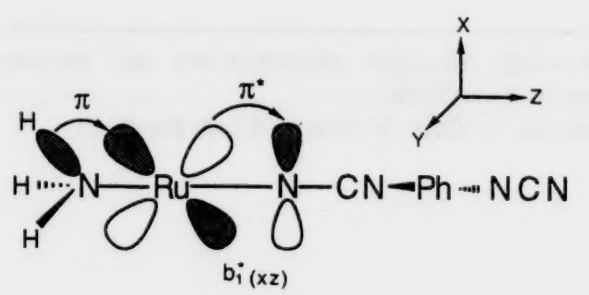
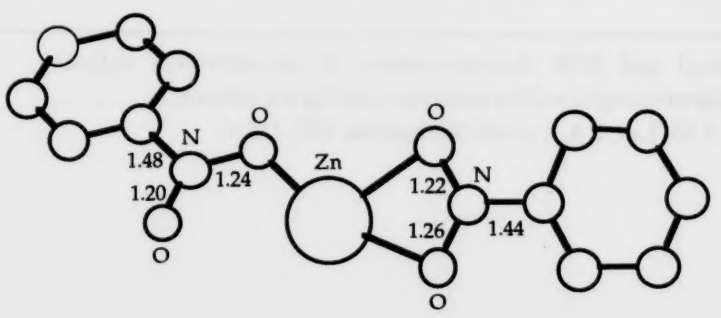
Excitation-energy dependent photochemistry and resonance Raman spectra of $Cr(CNPh)_6$ 17
E. Mašková, A. Vlček, Jr. (Prague, Czech Republic)



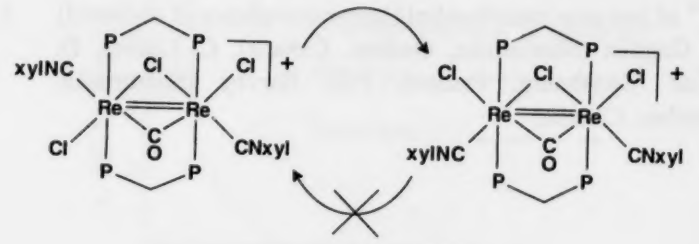
Optical and EPR characterization of *Desulfovibrio vulgaris* (Hildenborough) sulfite reductase and ligand adducts 25
S.M. Lui, J.A. Cowan (Columbus, OH, USA)



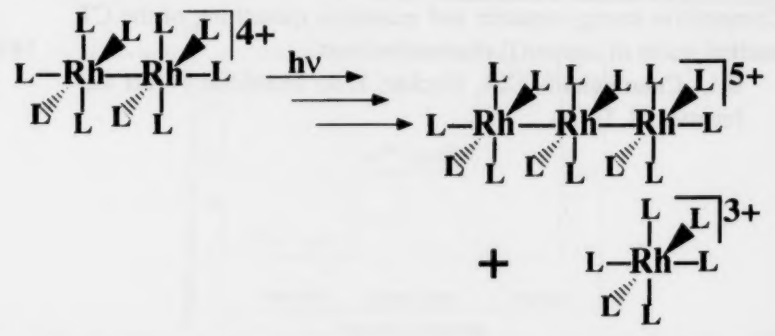
Elsevier Science S.A.

Transition metal complexes with amidinato ligands: the ubiquitous tris-chelated structural motif..... 31 F.A. Cotton, L.M. Daniels, D.J. Maloney (College Station, TX, USA), C.A. Murillo (Ciudad Universitaria, Costa Rica)	 M^{III} = Cr, Fe, Co, Ru M^{II} = Fe
The linear and non-linear optical properties of some conjugated ferrocene compounds with potent heterocyclic acceptors..... 43 V. Alain (Paris, France), A. Fort, M. Barzoukas (Strasbourg, France), C.-T. Chen (Pasadena, CA, USA), M. Blanchard-Desce (Paris, France), S.R. Marder, J.W. Perry (Pasadena, CA, USA)	
Excited state absorption spectra of the tetranuclear cuprous iodide cluster $Cu_4I_4(py)_4$ and related species..... 51 E. Lindsay, P.C. Ford (Santa Barbara, CA, USA)	
Buffer-induced anomalies in the Fenton chemistry of iron and copper..... 57 B.R. Van Dyke, D.A. Clopton, P. Saltman (La Jolla, CA, USA)	$3AH_2 + O_2 + 2H^+$ Fe/Cu ⇓ O_2 $3AH + {}^{\bullet}OH + OH^- + H^+$
Mononuclear and dinuclear ruthenium(III) and ruthenium(IV) complexes of 1,4-dicyanamido-2,5-dimethylbenzene dianion..... 63 M.L. Naklicki, C.A. White (Ottawa, Ontario, Canada), V.V. Kondratiev (St. Petersburg, Russia), R.J. Crutchley (Ottawa, Ontario, Canada)	
Complexation of $Zn(OTeF_5)_2$ by weakly coordinating solvents and single-crystal X-ray structures of $[Zn(OTeF_5)_2(PhNO_2)_2]_2$ and $Zn(OTeF_5)_2(PhNO_2)_3$..... 71 J.J. Rack, P.K. Hurlburt, P.J. Kellett, J.S. Luck, O.P. Anderson, S.H. Strauss (Fort Collins, CO, USA)1	

Reactions of the dirhenium(II) complexes $Re_2X_4(dppm)_2$ (X = Cl, Br; dppm = $Ph_2PCH_2PPh_2$) with isocyanides VI. Further studies on isomers of the edge-sharing bioctahedral species $[Re_2Cl_3(\mu\text{-dppm})_2(CO)(CNxyl)_2]^+$ 81
W. Wu, P.E. Fanwick, R.A. Walton (West Lafayette, IN USA)

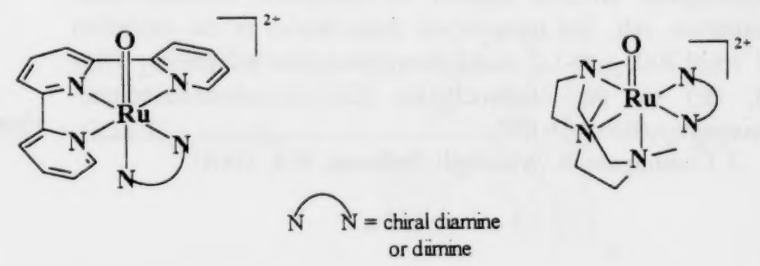


Photochemistry of deca(acetonitrile) dirhodium(II) cation: evidence for kilosecond-lived photoinduced charge separation... 91
C.A. James, D.E. Morris, S.K. Doorn (Los Alamos, NM, USA), C. Anthony Arrington, Jr. (Greenville, SC, USA), K.R. Dunbar, G.M. Finnis, L.E. Pence (East Lansing, MI, USA), W.H. Woodruff (Los Alamos, NM, USA)

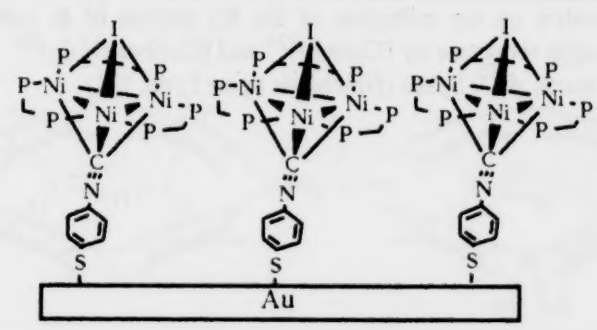


Site-directed replacement of the invariant lysine 73 of *Saccharomyces cerevisiae* iso-1-cytochrome *c* with all ribosomally encoded amino acids 97
L.M. Herrmann, P. Flatt, B.E. Bowler (Denver, CO, USA)

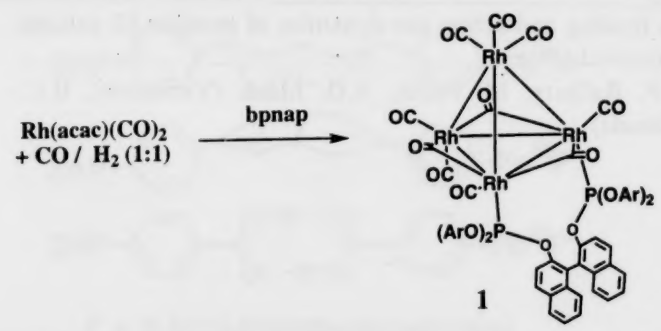
Chiral ruthenium(IV)-oxo complexes. Structure, reactivities of $[Ru(terpy)(N\cap N)O]^{2+}$ ($N\cap N$ = *N,N,N′,N′*-tetramethyl-1,2-diaminocyclohexane) and $[Ru(Me_3tacn)(cbpy)O]^{2+}$ (cbpy = (–)-3,3′-[(4*S-trans*)-1,3-dioxolane-4,5-dimethyl]-2,2′-bipyridine) .. 105
W.-C. Cheng, W.-Y. Yu, J. Zhu, K.-K. Cheung (Hong Kong), S. Peng (Taipei, Taiwan), C.-K. Poon, C.-M. Che (Hong Kong)

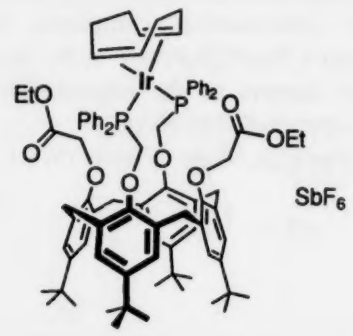
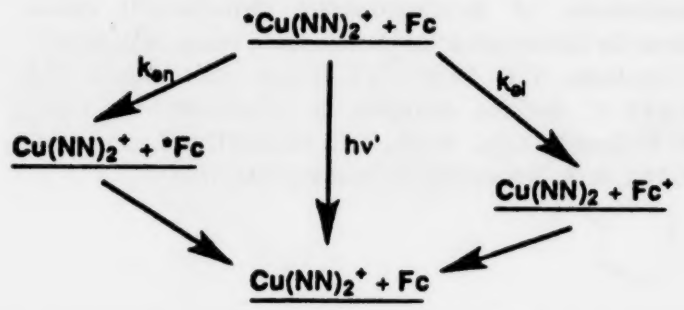
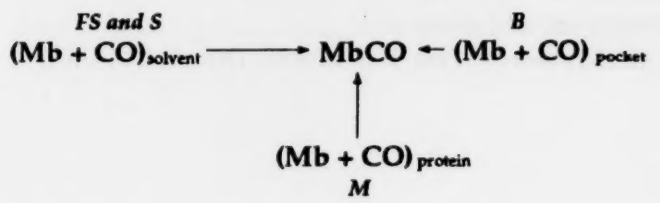
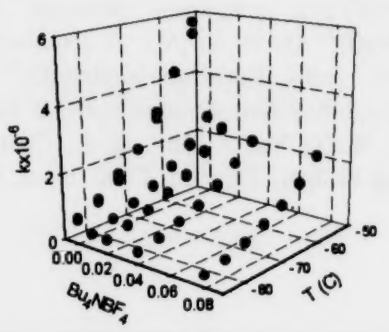
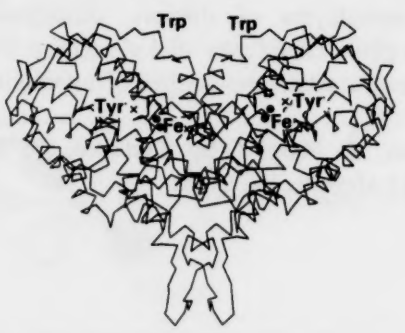
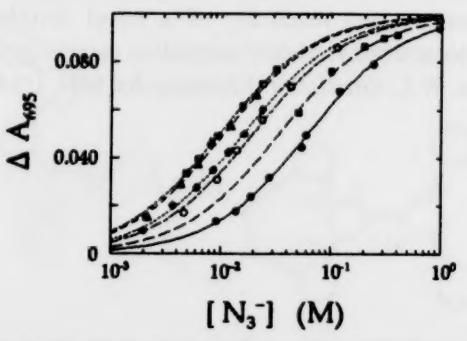


Self-assembled monolayers of dithiols, diisocyanides, and isocyanothiols on gold: 'chemically sticky' surfaces for covalent attachment of metal clusters and studies of interfacial electron transfer..... 115
J.I. Henderson, S. Feng, G.M. Ferrence, T. Bein, C.P. Kubiak (West Lafayette, IN, USA)

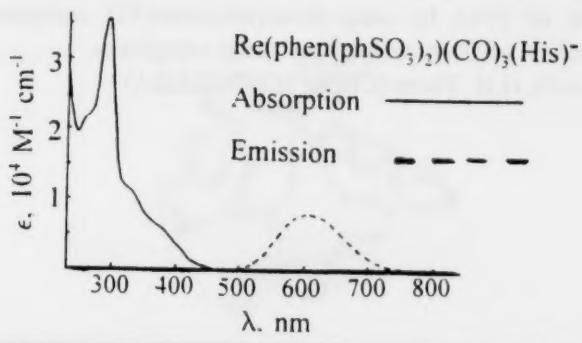


Synthesis, structure and reactivity of a novel bis(phosphite) tetrarhodium decacarbonyl hydroformylation catalyst precursor. 125
B. Moasser, W.L. Gladfelter (Minneapolis, MN, USA)

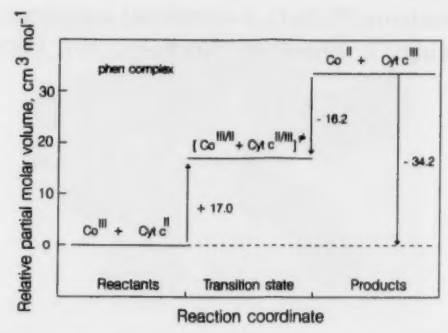


Preparation, luminescence and interactions with Li^+, Na^+ and UO_2^{2+} of two new metallocalix[4]arene complexes of iridium(I) 137 J. Gagnon (Sherbrooke, Québec, Canada), C. Loeber, D. Matt (Strasbourg, France), P.D. Harvey (Sherbrooke, Québec, Canada)	
Competitive energy-transfer and reductive quenching of the CT excited states of copper(I) phenanthrolines ..... 143 K.L. Cunningham, C.R. Hecker, D.R. McMillin (West Lafayette, IN, USA)	
Time-resolved near UV circular dichroism and absorption studies of carbonmonoxymyoglobin photolysis intermediates .... 149 E. Chen, D.S. Kliger (Santa Cruz, CA, USA)	
Outer-sphere electron transfer in methylene chloride: concentration, salt, and temperature dependences of the oxidation of *trans*-ReX_2(*cis*-1,2 bis(diphenylphosphino)ethylene)$_2$ (X = Cl, Br) by the clathrochelate [Co(1,2-cyclohexanedione-dioximate)$_3$(BButyl)$_2$]BF_4 ..... 159 J. Coddington, S. Wherland (Pullman, WA, USA)	
Kinetic studies on the reduction of the R2 protein of *E. coli* ribonucleotide reductase by $[Co(sep)]^{2+}$ and $[Co(9\text{-ane}N_3)_2]^{2+}$ 165 J.C. Swarts, A.G. Sykes (Newcastle upon Tyne, UK)	
Azide binding and active site dynamics of position-82 variants of ferricytochrome *c* ..... 171 S.P. Rafferty, M. Smith, A.G. Mauk (Vancouver, B.C., Canada)	

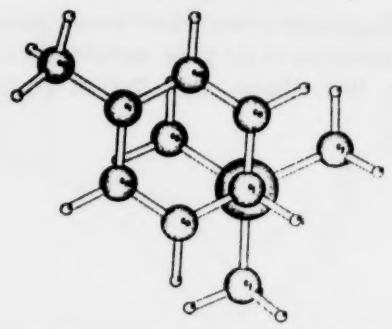
Photophysical properties of tricarbonyl(histidine)(diimine)-rhenium(I) complexes in aqueous solution 179
R.-J. Lin, K.-S. Lin, I-J. Chang (Taipei, Taiwan, ROC)



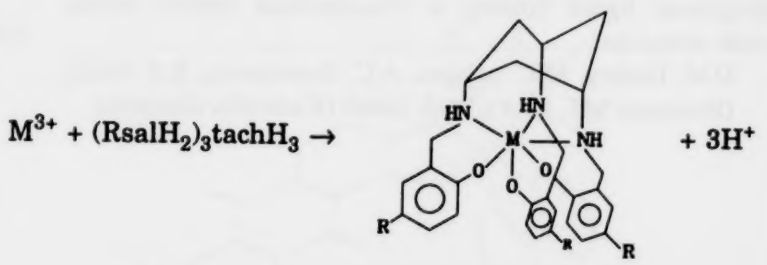
Volume of activation for the self-exchange reaction of cytochrome *c* 185
M. Meier, R. van Eldik (Erlangen, Germany)



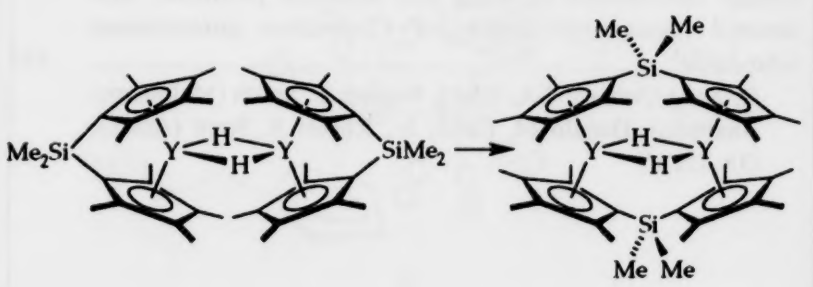
Cation-aromatic bonding in Group 14 organometallics 191
H. Basch (Ramat Gan, Israel)



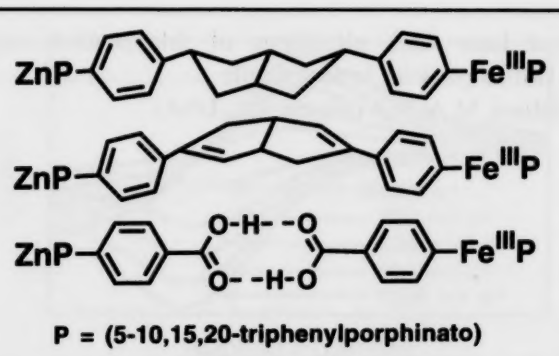
Iron-59 complexes of lipophilic hexadentate phenolate-derivatized cyclohexanetriamine ligands 201
J.E. Bollinger, W.A. Banks, A.J. Kastin, D.M. Roundhill (New Orleans, LA, USA)



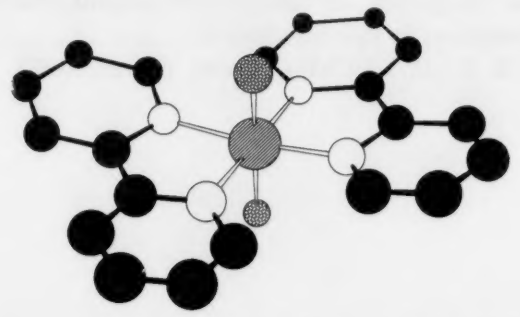
Synthesis and structural characterization of $\{(\eta^5\text{-}C_5Me_4)_2SiMe_2\}YCH(SiMe_3)_2$. Hydrogenation to $[\{(\eta^5\text{-}C_5Me_4)_2SiMe_2\}Y]_2(\mu_2\text{-}H)_2$ and its facile ligand redistribution to $Y_2[\mu_2\text{-}\{(\eta^5\text{-}C_5Me_4)SiMe_2(\eta^5\text{-}C_5Me_4)\}]_2(\mu_2\text{-}H)_2$ 205
E.B. Coughlin, L.M. Henling, J.E. Bercaw (Pasadena, CA, USA)



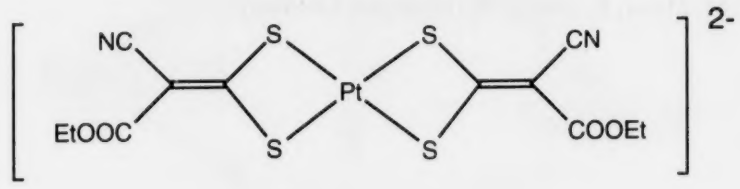
Synthesis of (porphinato)zinc(II)–spacer–(porphinato)iron(III) chloride complexes: a modular approach to fixed-distance electron-transfer model compounds through the efficacy of metal-mediated cross-coupling 211
P.J.F. de Rege, M.J. Therien (Philadelphia, PA, USA)



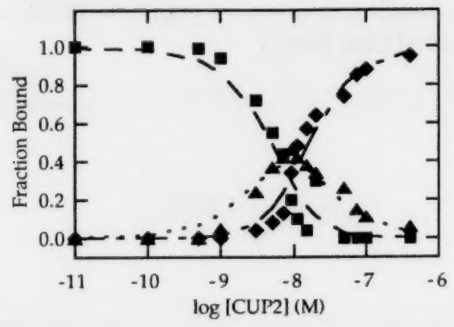
Oxidation of DNA by *trans*-dioxoruthenium(VI) complexes: self-inhibition of DNA cleavage by metal complexes..... 219
J.G. Goll, H.H. Thorp (Chapel Hill, NC, USA)



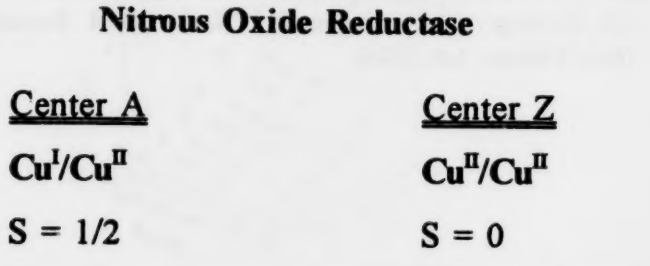
Luminescent platinum(II) bis(1,1-dithiolate) complexes 225
S.D. Cummings, R. Eisenberg (Rochester, NY, USA)



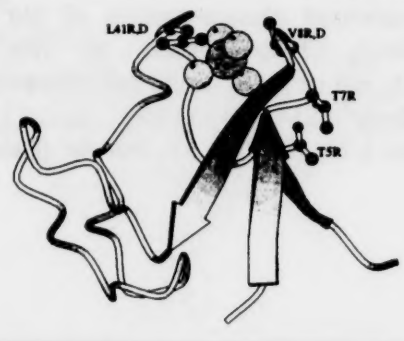
Affinity of CUP2, a copper-dependent transcription factor, for DNA sequences upstream of the yeast metallothionein gene..... 233
J.A. Johnson, W.J. Dixon, T.D. Tullius (Baltimore, MD, USA)



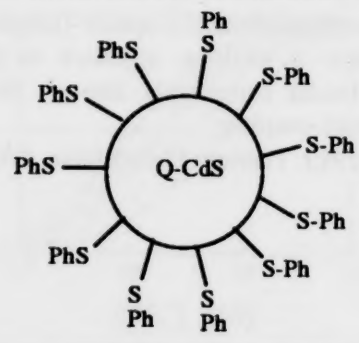
Exogenous ligand binding to *Pseudomonas stutzeri* nitrous oxide reductase..... 239
D.M. Dooley, M.L. Alvarez, A.C. Rosenzweig, R.S. Hollis (Bozeman, MT, USA), W.G. Zumft (Karlsruhe, Germany)

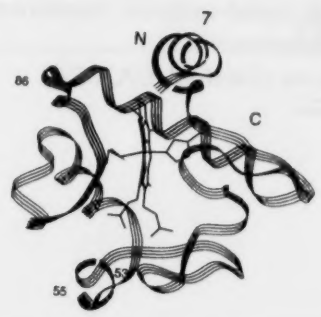
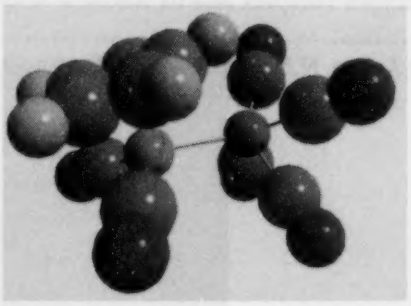
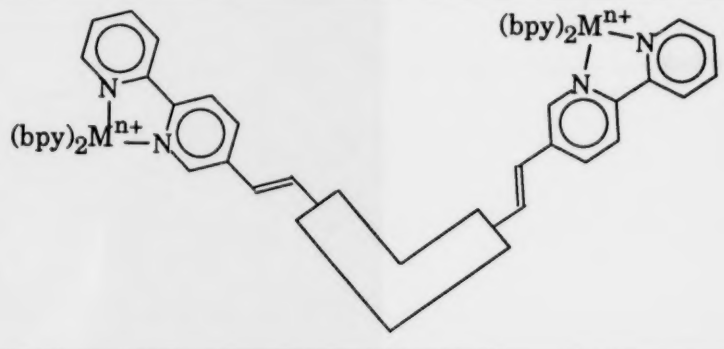
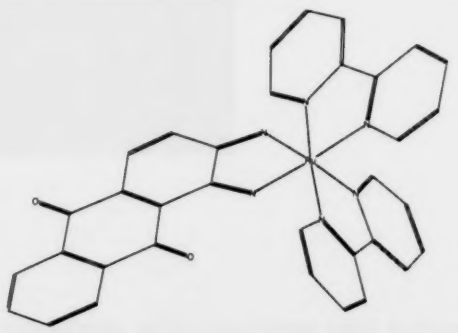
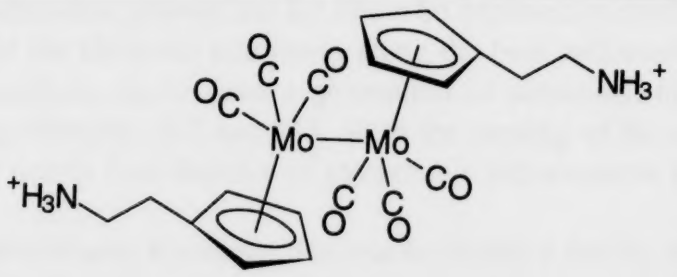
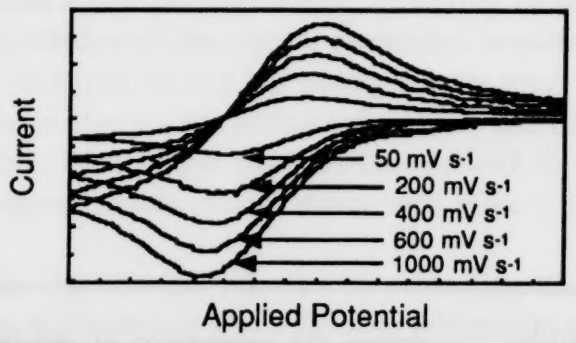


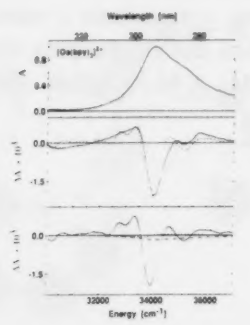
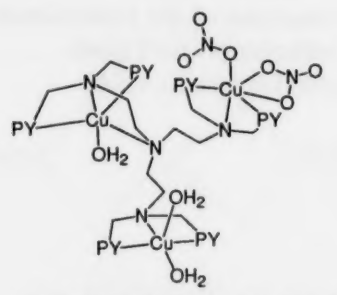
Protein determinants of metal site reduction potentials: site-directed mutagenesis studies of *Clostridium pasteurianum* rubredoxin 245
Q. Zeng (Athens, GA, USA), Eugene T. Smith (Melbourne, Australia), Donald M. Kurtz, Jr., Robert A. Scott (Athens, GA, USA)



Nanosecond laser flash photolysis of thiophenolate-capped cadmium sulfide particles in acetonitrile..... 253
T. Uchihara, M.A. Fox (Austin, TX, USA)



Local stabilities of horse cytochrome *c* metalloderivatives as probed by tryptic digestion and electrospray mass spectrometry. Y. Hu, C. Fenwick, A.M. English (Montreal, Quebec, Canada)	261	
Thermal substitution reactions of the heterodinuclear complex $CpFe(CO)_2Co(CO)_4$ with phosphorus ligands ..... X. Song, T.L. Brown (Urbana, IL, USA)	271	
Dinuclear Ru^{II} and/or Os^{II} complexes of bis-bipyridine bridging ligands containing adamantane spacers: synthesis, luminescence properties, intercomponent energy and electron transfer processes..... M. Frank, M. Nieger, F. Vögtle (Bonn, Germany), P. Belser, A. von Zelewsky (Fribourg, Switzerland), L. De Cola, V. Balzani, F. Barigelletti, L. Flamigni ((Bologna, Italy)	281	
Bis(2,2′-bipyridine)(1,2-diimino-9,10-anthraquinone)ruthenium-(II): a complex containing an exceptionally strong π-accepting α–α' diimine ligand I. Synthesis, crystal and electronic structures ..... C.J. da Cunha (Paraná, Brazil), S.S. Fielder, D.V. Stynes, H. Masui, P.R. Auburn, A.B.P. Lever (Toronto, Ontario, Canada)	293	
Photochemically reactive polymers: synthesis and photochemistry of polyamides containing $Cp_2Mo_2(CO)_6$ molecules along the polymer backbone..... G.F. Nieckarz, D.R. Tyler (Eugene, OR, USA)	303	 1
Charge transfer rate constants for the reduction of cobaltocenium at accumulated N-Si electrodes ..... M.X. Tan, N.S. Lewis (Pasadena, CA, USA)	311	

Dipolar character of ligand-centered transitions in transition metal tris-bipyridyl complexes ..... 323 S.J. Hug, S.G. Boxer (Stanford, CA, USA)	
A new trinuclear copper complex and its reactions with plasmid DNA ..... 329 S.T. Frey, H.H.J. Sun, N.N. Murthy, K.D. Karlin (Baltimore, MD, USA)	 $[Cu_3(L)(NO_3)_2(H_2O)_3]^{4+}$, PY = 2-pyridyl

Author index 339

The publisher encourages the submission of articles in electronic form thus saving time and avoiding rekeying errors. A leaflet describing our requirements is available from the publisher on request.